Attorney's Docket No.: 15670-021001/SD9-141-2

1616

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Nigam, et al.
Serial No.: 09/595,195
Filed : June 16, 2000
Title : EX-VIVO PROPAGATION OF KIDNEY

Art Unit: 1616
Examiner: Unknown

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Dear Sir:

Applicants call attention to the attached Information Disclosure Statement and documents listed on form PTO-1449.

This filing is being made before the receipt of a first Office action on the merits. No fee is required.

The documents are in the English language; hence no concise explanation is necessary per Rule 98(a)(3).

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Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 15670-021001	Application No. 09/595,195
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Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AU	Hammerman, et al., "Acute renal failure. III. The role of growth factors in the process of renal regeneration and repair", Am. J. Physiol. Renal Physiol., Vol. 279, pp. F3-F11, 2000
	AV	Steinberg, et al., "Cadherins and their connections: adhesion junctions have broader functions", Curr. Opin. Cell Biol., Vol. 11, No. 5, pp. 554-560, October, 1999
	AW	Le, et al., "Recycling of E-Cadherin: A Potential Mechanism for Regulating Cadherin Dynamics", The Journal of Cell Biology, Vol. 146, No. 1, pp. 219-232, July 12, 1999
	AX	Denker, et al., "Molecular structure and assembly of the tight junction", Am. J. Physiol. Renal Physiol, Vol. 274, pp. F1-F9, 1998
	AY	Tsukamoto, et al., "Role of tyrosine phosphorylation in the reassembly of occludin and other tight junction proteins", Am. J. Physiol. Renal Physiol., Vol. 276, pp. F737-750, 1999
	AZ	Ye, et al., "A role for intracellular calcium in tight junction reassembly after ATP depletion-repletion", Am. J. Physiol. Renal Physiol., Vol. 277, pp. F524-F532, 1999
	AAA	Nigam, et al., "A Set of Endoplasmic Reticulum Proteins Possessing Properties of Molecular Chaperones Includes Ca^{2+}-binding Proteins and Members of the Thioredoxin Superfamily", The Journal of Biological Chemistry, Vol. 269, No. 3, pp. 1744-1749, January 21, 1994
	ABB	Bush, et al., "Proteasome Inhibition Leads to a Heat-shock Response, Induction of Endoplasmic Reticulum Chaperones, and Thermotolerance", The Journal of Biological Chemistry, Vol. 272, No. 14, pp. 9086-9092, April 4, 1997
	ACC	Dong, et al., "Intracellular CA^{2+} Thresholds That Determine Survival or Death of Energy-Deprived Cells", American Journal of Pathology, Vol. 152, No. 1, pp. 231-240, January 1998
	ADD	Kribben, et al., "Evidence for Role of Cytosolic Free Calcium in Hypoxia-Induced Proximal Tubule Injury", J. Clin. Invest., Vol. 93, pp. 1922-1929, May, 1994
	AEE	Liu, et al., "Endoplasmic Reticulum Stress Proteins Block Oxidant-induced CA^{2+} Increases and Cell Death", The Journal of Biological Chemistry, Vol. 273, No. 21, pp. 12858-12862, May 22, 1998
	AFF	Yu, et al., "The Endoplasmic Reticulum Stress-Responsive Protein GRP78 Protects Neurons Against Excitotoxicity and Apoptosis: Suppression of Oxidative Stress and Stabilization of Calcium Homeostasis", Experimental Neurology, Vol. 155, No. 2, pp. 302-314, February, 1999
	AGG	Bian, et al., "Roles of Cytoplasmic Ca^{2+} and intracellular CA^{2+} stores in induction and suppression of apoptosis in S49 cells", American Journal of Physiology, Vol. 272, No. 4, pp. C1241-1249, April, 1997
	AHH	Bush, et al., "Genesis and reversal of the ischemic phenotype in epithelial cells", The Journal of Clinical Investigation, Vol. 106, No. 5, pp. 621-626, September, 2000
	AII	Milner, et al., "A Novel 17 kD Heparin-Binding Growth Factor (HBGF-8) in Bovine Uterus: Purification and N-Terminal Amino Acid Sequence", Biochemical and Biophysical Research Communications, Vp;/ 165, No. 3, pp. 1096-1103, December 29, 1989
	AJJ	Mitsiadis, et al., "Expression of the heparin-binding cytokines, midkine (MK) and HB-GAM (pleiotrophin) is associated with epithelial-mesenchymal interactions during fetal development and organogenesis", Development, Vol. 121, pp. 37-51, 1995
	AKK	Sato, et al., "Pleiotrophin as a Swiss 3T3 Cell-Derived Potent Mitogen for Adult Rat Hepatocytes", Experimental Cell Research, Vol. 246, Number 1, pp. 152-164, January 10, 1999
	ALL	Kurtz, et al., "Pleiotrophin and Midkine in Normal Development and Tumor Biology", Critical Reviews in Oncogenesis, Vol. 6, No. 2, pp. 151-177, 1995

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	AMM	Rauvala, et al. "Expression of HB-GAM (heparin-binding growth-associated molecules) in the pathways of developing axonal processes in vivo and neurite outgrowth in vitro induced by HB-GAM" Developmental Brain Research, Voll. 79, pp. 157-176, 1994
	ANN	Imai, et al., "Osteoblast Recruitment and Bone Formation Enhanced by Cell Matrix-associated Heparin-binding Growth-associated Molecule (HB-GAM), The Journal of Cell Biology, Vol. 143, Number 4, pp. 1113-1128, November 16, 1998
	AOO	Tomita, et al, "Direct in Vivo Gene Introduction into Rat Kidney", Biochemical and Biophysical Research Communications, Vol. 186, No. 1, pp. 129-134, July 15, 1992
	APP	Zhu, et al., "Systemic Gene Expression After Intravenous DNA Delivery into Adult Mice", Science, Vol. 261, pp. 209-211, July 9, 1993
	AQQ	Moullier, et al., "Adenoviral-mediated gene transfer to renal tubular cells *in vivo*", Kidney International, Vol. 45, pp. 1220-1225, 1994
	ARR	Montesano, et al., "Induction of Epithelial tubular Morphogenesis in Vitro by Fibroblast-Derived Soluble Factors", Cell, Vol. 66, pp. 697-711, August 23, 1991
	ASS	Bladt, et al., "Essential role for the c-met receptor in themigration of myogenic precursor cells into the limb bud", Nature, Vol. 376, No. 6543, pp. 68-771, August 31, 1995
	ATT	Schmidt, et al., "Scatter factor/hepatocyte growth factor is essential for liver development", Nature, Vol. 373, No. 6516, pp. 699-702, February 23, 1995
	AUU	Schuchardt, et al., "Renal agenesis and hypodysplasia in ret-k- mutant mice result from defects in ureteric bud development", Development, Vol. 122, No. 6, pp. 1919-1929, June, 1996
	AVV	Metzger, et al., "Genetic Control of Branching Morphogenesis", Science, Vol. 284, pp. 1635-1639, June 4, 1999
	AWW	Ohuchi, et al., "FGF10 Acts as a Major Ligand for FGF Receptor 2 IIIb in Mouse Multi-Organ Development", Biochemical and Biophysical Research Communications, Vol. 277, No. 3, pp. 643-649, November 2, 2000
	AXX	Bullock, et al., "Renal agenesis in mice homozygous for a gene trap mutation in the gene encoding heparan sulfate 2-sulfotransferase", Genes & Development, Vol. 12, No. 12, pp. 1894-1906, June 15, 1998
	AYY	Bullock, et al., "Developmental and species differences in the response of the ureter to metabolic inhibition", European Journal of Physiology, Vol. 436, No. 3, pp. 443-448, August, 1998
	AZZ	Davies, et al., "Sulphated proteoglycan is required for collecting duct growth and branching but not nephron formation during kidney development", Development, Vol. 121, Issue 5, pp. 1507-1517, 1995
	AAAA	Kispert, et al., "Proteoglycans are required for maintenance of Wnt-11 expression in the ureter tips" Development, Vol. 122, pp. 3627-3637, 1996
	ABBB	Montesano, et al., "Identification of a Fibroblast-Derived Epithelial Morphogen as Hepatocyte Growth Factor", Cell, Vol. 67, No. 5, pp. 901-908, November 29, 1991
	ACCC	Zelzer, et al., "Cell fate choices in *Drosophila* tracheal morphogenesis", BioEssays, Vol. 22, No. 3, pp. 219-226, March, 2000
	ADDD	Enomoto, et al., "GFRα-1 Deficient Mice Have Deficits in the Enteric Nervous System and Kidneys", Neuron, Vol. 21, No. 2, pp. 317-324, August, 1998
	AEEE	Imai, et al., "Towards gene therapy for renal diseases", Nephrologie, Vol. 18, No. 7, pp. 397-402, 1998

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	AFFF	Imai, et al., "Gene transfer and kidney disease", Journal of Nephrology, Vol. 11, No. 1, pp. 16-19, January-February, 1998
	AGGG	Imai, et al., "Strategies of gene transfer fo the kidney", Kidney, Vol. 53, No. 2, pp. 264-272, February, 1998
	AHHH	Meng, et al., "Pleiotrophin signals increased tyrosine phosphorylation of β-catenin through inactivation of the intrinisic catalytic activity of the receptor-type protein tyrosine phosphatase β/ζ", Proc. Natl. Acad. Sci., Vol. 97, No. 6, pp. 2603-2608, March 14, 2000
	AIII	Vainio, et al., "Epithelial-Mesenchymal Interactions Regulate the Stage-Specific Expression of a Cell Surface Proteoglycan, Syndecan, in the Developing Kidney", Developmental Biology, Vol. 134, No. 2, pp. 382-391, August, 1989
	AJJJ	Vainio, et al., "Syndecan and Tenascin Expression is Induced by Epithelial-Mesenchymal Interactions in Embryonic Tooth Mesenchyme", The Journal of Cell Biology, Vol. 108, No. 5, pp. 1945-1954, May, 1989
	AKKK	Ohuchi, et al., "Renal tubular effects of endothelin-B receptor signaling: its role in cardiovascular homeostasis and extracellular volume regulation", Curr Opin Nephrol Hyperten., Vol. 9, No. 4, pp. 435-439, July, 2000
	ALLL	Thadhani, et al., "Acute renal failure", The New England Journal of Medicine, Vol. 334, No. 2, pp. 1448-1460, May 30, 1996
	AMMM	Bonventre, et al., "Acture renal failure. I. Relative importance of proximal vs. distal tubular injury", Am. J. Physiol, Vol. 275, No. 5, pp. F623-F631, November, 1998
	ANNN	Molitoris, et al., "Acute renal failure. II. Experimental models of acute renal failure: imperfect but indispensable", Am. J. Physiol. Renal Physiol., Vol. 278, No. 1, pp. F1-F12, January, 2000
	AOOO	Fish, et al., "Alterations of Epithelial Polarity and the Pathogenesis of Disease States", The New England Journal of Medicine, Vol. 330, No. 14, pp. 1580-1588, April 7, 1994
	APPP	Tsukamoto, et al., "Tight Junction Proteins Form Large Complexes and Associate with the Cytoskeleton in an ATP D epletion Model for Reversible Junction Assembly", The Journal of Biological Chemistry, Vol. 272, No. 26, pp. 16133-16139, June 27, 1997
	AQQQ	Hammerman, et al., "Acute renal failure. III. The role of growth factors in the process of renal regeneration and repair", Am. J. Physiol. Renal Physiol., Vol. 279, No. 1, pp. F3-F11, July, 2000
	ARRR	Gailit, et al., "Redistribution and dysfunction of integrins in cultured renal epithelial cells exposed to oxidative stress", American Journal of Physiology, Vol. 264, No. 1, pp. F149-F157, January, 1993
	ASSS	Lieberthal, et al., "β Integrin-Mediated Adhesion between Renal Tubular Cells after Anoxic Injury", Journal of the American Society of Nephrology, Vol. 8, Issue 2, pp. 175-183, February, 1997
	ATTT	Zuk, et al., "Polarity, integrin, and extracellular matrix dynamics in the postischemic rat kidney", American Journal of Physiology, Vol. 275, No. 3, pp. C711-C731, September, 1998
	AUUU	Gumbiner, et al., "The Role of the Cell Adhesion Molecule Uvomorulin in the Formation and Maintenance of the Epithelial Junctional Complex", The Journal of Cell Biology, Vol. 107, No. 4, pp. 1575-1587, October, 1988
	AVVV	McNeill, et al., "Novel Function of the Cell Adhesion Molecule Uvomorulin as an Inducer of Cell Surface Polarity", Cell, Vol. 62, No. 2, pp. 309-316, July 27, 1990
	AWWW	Mandel, et al., "ATP depletion: a novel method to study junctional properties in epithelial tissues. II. Internalization of Na^+, K^+-ATPase and E-cadherin", Journal of Cell Science", Vol. 107, Part 12, pp. 309-316, December, 1994

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	AXXX	Tsukita, et al., "Structural and signalling molecules come together at tight junctions", Current Opinion in Cell Biology, Vol. 11, No. 5, pp. 628-633, October, 1999
	AYYY	Denker, et al., "Molecular structure and assembly of the tight junction", American Journal of Physiology, Vol. 274, No. 1, pp. F1-F9, January, 1998
	AZZZ	Gopalakrishnan, et al., "Rho GTPase signaling regulates tight junction assembly and protests tight junctions during ATP depletion", American Journal of Physiology, Vol. 275, No. 3, pp. C798-C809, September, 1998
	AAAAA	Kuznetsov, et al., "Folding of Secretory and Membrane Proteins", The New England Journal of Medicine, Vol. 339, No. 23, pp. 1688-1695, December 3, 1998
	ABBBB	Van Why, et al., "Thresholds for cellular disruption and activation of the stress response in renal epithelia", American Journal of Physiology, Vol. 277, No. 2, pp. F227-F234, August, 1999
	ACCCC	Gething, et al., "Protein folding in the cell", Nature, Vol. 355, No. 6355, pp. 33-45, January, 1992
	ADDDD	Gabai, et al., "Rise in heat-shock protein level confers tolerance to energy deprivation", FEBS Letters, Vol. 327, No. 3, pp. 247-250, August, 1993
	AEEEE	Georgopoulos, et al., "Role of the major heat shock proteins as molecular chaperones", Annual Review of Cell Biology, Vol. 9, pp. 601-634, 1993
	AFFFF	Yoo, et al., "Anti-Inflammatory Effect of Heat Shock Protein Induction is Related to Stabilization of IκBα Through Preventing IκB Kinase Activation in Respiratory Epithelial Cells", The Journal of Immunology, Vol. 164, No. 10, pp. 5416-5423, May 15, 2000
	AGGGG	Rauchman, et al., "An osmotically tolerant inner medullary collecting duct cell line from an SV40 transgenic mouse", American Journal of Physiology, Vol. 265, No. 3, pp. F416-F424, September, 1993
	AHHHH	Barasch, et al., "A ureteric bud cell line induces nephrogenesis in two steps by two distinct signals", American Journal of Physiology, Vol. 271, No. 1, pp. F50-F61, July, 1996
	AIIII	Barasch, et al., "Ureteric bud cells secrete multiple factors, including bFGF, which rescue renal progenitors from apoptosis", American Journal of Physiology, Vol. 273, No. 5, pp. F757-F767, November, 1997
	AJJJJ	Laitinen, et al., "Changes in the Glycosylation Pattern During Embryonic Development of Mouse Kidney as Revealed with lectin Conjugates", The Journal of Histochemistry and Cytochemistry, Vol. 35, No. 1, pp. 55-65, 1987
	AKKKK	Gilbert, et al., "Defect of Nephrogenesis Induced by Gentamicin in Rat Metanephric Organ Culture", Laboratory Investigation, Vol. 70, No. 5, pp. 656-666, May, 1994
	ALLLL	O'Rourke, et al., "Expression of c-ret promotes morphogenesis and cell survival in mIMCD-3 cells", American Journal of Physiology, Vol. 276, No. 4, pp. F581-F589, April, 1999
	AMMMM	Al-Awqati, et al., "Architectural patterns in branching morphogenesis in the kidney", Kidney International, Vol. 54, No. 6, pp. 1832-1842, December, 1998
	ANNNN	Liu, et al., "Comparative Role of Phosphotyrosine Kinase Domains of c-ros and c-ret Protooncogenes in Metanephric Development with Respect to Growth Factors and Matrix Morphogens", Developmental Biology, Vol. 178, pp. 133-148, 1996
	AOOOO	Rauvala, et al., "An 18-kd heparin-binding protein of developing brain that is distinct from fibroblast growth factors", The EMBO Journal, Vol. 8, no. 10, pp. 2933-2941, 1989
	APPPP	Li, et al., "Cloning and Expression of a Developmentally Regulated Protein that Induces Mitogenic and Neurite Outgrowth Activity", Science, Vol. 250, No. 4988, pp. 1690-1694, December 21, 1990

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	AQQQQ	Vanderwinden, et al., "Cellular distribution of the new growth factor Pleiotrophin (HB-GAM) mRNA in developing and adult rat tissues", Anat. Embryol, Vol. 186, pp. 387-406, 1992
	ARRRR	Sweet, et al., "Impaired Organic Anion Transport in Kidney and Choroid Plexus of Organic Anion Transporter 3 (*Oat3 (Slc22a8)*) Knockout Mice", The Journal of Biological Chemistry, Vol. 277, No. 30, pp. 26934-26943, July 26, 2002
	ASSSS	Sweet, et al., "The organic anion transporter family: from physiology to ontogeny and the clinic", Am. J. Physiol. Renal Physiol. Vol. 281, pp. F197-F205, 2001
	ATTTT	Steer, et al. "A strategy for in vitro propagation of rat nephrons Rapid Communication", Kidney International, Vol. 62, pp. 1958-1965, 2002
	AUUUU	Nigam, et al., "Toward an understanding of epithelial morphogenesis in health and disease", Current Opinion in Nephrology and Hypertension, Vol. 1, pp. 187-191, 1992
	AVVVV	Sakurai, et al., "Identification of pleiotrophin as a mesenchymal factor involved in ureteric bud branching morphogenesis", Development, Vol. 128, pp. 3283-3293, 2001

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U.S. Patent Documents

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	AA						
	AB						
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	AG						
	AH						
	AI						
	AJ						
	AK						

Foreign Patent Documents or Published Foreign Patent Applications

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	AL							
	AM							
	AN							
	AO							
	AP							

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	AQ	Kuznetsov, et al., "Perturbations in maturation of secretory proteins and their association with endoplasmic reticulum chaperones in a cell culture model for epithelial eschemia", Proc. Natl. Acad. Sci., Vol. 93, pp. 8584-8589, August, 1996
	AR	Molitoris, et al., "Role of the actin cytoskeleton in ischemia-induced cell injury and repair", Pediatric Nephrol., Vol. 11, pp. 761-767. 1997
	AS	Bush, et al., "Selective degradation of E-cadherin and dissolution of E-cadherin-catenin complexes in epithelial ischemia", Am. J. Physiol. Renal Physiol., Vol. 278, pp. F847-852, 2000
	AT	Bush, et al., "Pretreatment with inducers of ER molecular chaperones protects epithelial cells subjected to ATP depletion", Am. J. Physiol. Renal Physiol., Vol. 277, pp. F211-218, 1999

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